

Notice of Allowability

Application No.

09/883,276

Examiner

Marc S. Zimmer

Applicant(s)

OSADA ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephonic interview on January 8, 2004.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-946) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____ | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Gallagher on January 8, 2004.

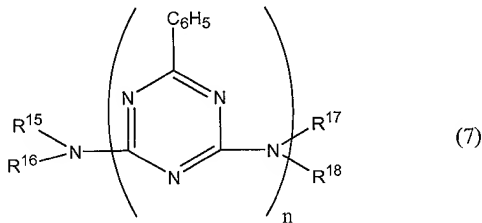
The application has been amended as follows:

Please replace claim 11 with the following:

11. A semiconductor encapsulating epoxy resin ^{composition}~~composition~~ comprising:

(A) an epoxy resin,

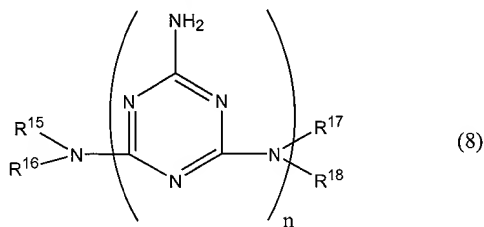
(B) a phenolic curing agent selected from the group consisting of (i) a phenol novolac resin having a benzoguanamine skeleton represented by the formula (7),



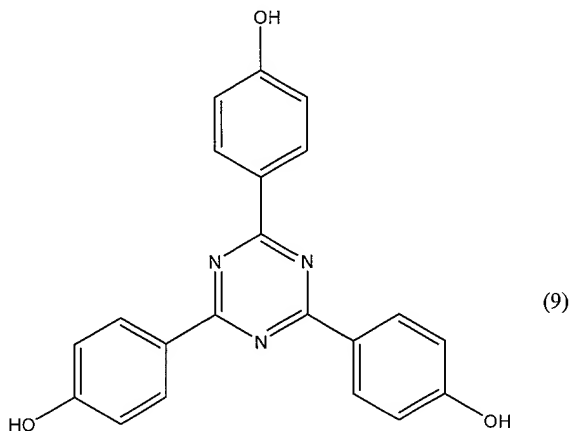
wherein R^{15} , R^{16} , R^{17} , and R^{18} are hydrogen or a phenol novolac resin having one free valence bond, with the proviso that at least one of R^{15} , R^{16} , R^{17} , and R^{18} is a

Art Unit: 1712

phenol novolac resin having one free valence bond, and n is an integer of 1 to 10 selected so as to give a phenolic hydroxyl equivalent of 130 or 165, (ii) a phenol novolac resin having a melamine skeleton represented by the formula (8)



wherein R^{15} , R^{16} , R^{17} , and R^{18} are hydrogen or a phenol novolac resin having one free valence bond, with the proviso that at least one of R^{15} , R^{16} , R^{17} , and R^{18} is a phenol novolac resin having one free valence bond, and n is an integer of 1 to 10 selected so as to give a phenolic hydroxyl equivalent of 117, and (iii) a phenolic resin represented by the formula



(C) a molybdenum compound, and
(D) 300 to 900 parts by weight per 100 parts by weight of components (A) and (B) combined of an inorganic filler,
wherein nitrogen atoms are contained in component (A) and/or component (B) in an amount of 1.5 to 20% by weight based on the weights of component (A) and (B) combined.

In a telephonic interview with Applicant on the aforementioned date, it was pointed out that claim 11, which had been modeled after the embodiments of component (B) on pages 13 and 14 of the Specification was indefinite as written. In particular, the hydroxyl equivalents of each of (i), (ii), and (iii) had not been delineated in the claim. Suggestions were also made as to how the claim could be rearranged to make it more readable. Applicant and the Examiner agreed on the language set forth above and it was agreed that the modifications of claim 11 would be outlined in an Examiner's amendment.

Allowable Subject Matter

Previously, Applicant had submitted a Rule 1.132 Declaration having three experiments that were purported to illustrate synergism between the molybdenum compound and the nitrogen-containing curing agent for imparting flame-retarding properties to a composition containing each. Having pondered the evidence, the Examiner determined that, while it was clear that a combination of these ingredients provided a composition with better flame resistance than analogous compositions containing only one of said materials, it was not clear that the improvements were

anything more than an additive effect, especially in view of the qualitative manner in which flame retardance was disclosed.

In response, Applicant has submitted for the Examiner's consideration the burn times for all experiments that have been disclosed throughout the prosecution of this case including those summarized in the aforementioned declaration. These figures provide a substantially clearer portrayal of the synergism that results when the nitrogen-containing compound and molybdenum compound are employed in concert. Whereas compositions containing zinc molybdate alone or a nitrogen-containing compound alone exhibit burn times in excess of 300 seconds, those possessing both materials have burn times of ca. 25 or less. This amounts to a 10-fold difference in performance and illustrates clearly that there is marked synergy between these materials. For this reason, the 103 rejection is hereby withdrawn and claims 1-13 are now considered allowable.

As an aside, it is noted that the rejection over the combination of Maeda and Honda had been withdrawn earlier without any indication of why it was no longer considered relevant. Honda does not teach a nitrogen content in the phenolic curing agent that would provide 1.5 to 20% by weight nitrogen based on the full weight of the epoxy resin and curing agent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Application/Control Number: 09/883,276
Art Unit: 1712


Page 6

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

January 9, 2004


MARGARET G. MOORE
PRIMARY EXAMINER